

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of : Customer Number: 20277  
Shiro NISHIMOTO, et al. : Confirmation Number: 8286  
Application No.: 10/825,178 : Tech Center Art Unit: 1791  
Filed: April 16, 2004 : Examiner: Queenie S. DEHGHAN  
:  
For: PRESS MOLDING METHOD FOR GLASS AND MANUFACTURING METHOD FOR  
GLASS SUBSTRATE USING THIS METHOD

**TRANSMITTAL OF APPEAL BRIEF**

Mail Stop Appeal Brief  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

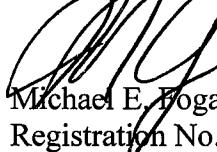
Sir:

Submitted herewith is Appellant's Appeal Brief in support of the Notice of Appeal filed June 20, 2008. Please charge the Appeal Brief fee of \$510.00 to Deposit Account 500417.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. 1.17 and 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**APPEAL BRIEF**

Mail Stop Appeal Brief  
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Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed June 20, 2008, wherein Appellant appeals from the Primary Examiner's rejection of claims 20 and 21 in the final Office Action dated February 20, 2008.

**Real Party In Interest**

This application is assigned to Minolta Co., Ltd by an assignment recorded on November 6, 2002, at Reel 013478, Frame 0104.

**Related Appeals and Interferences**

There are no related appeals and interferences associated with the above-referenced patent application.

**Status of Claims**

1. Claims canceled: 1-19
2. Claims withdrawn from consideration, but not canceled: None
3. Claims pending: 20 and 21
4. Claims allowed: None
5. Claims rejected: 20 and 21
6. Claims on appeal: 20 and 21

**Status of Amendments**

All amendments have been entered.

**Summary of Claimed Subject Matter**

Claim 20 is the only independent and is directed to a process for manufacturing a glass substrate 21 with a center hole 23. FIG. 11. Specifically, claim 20 requires the following **two distinct steps** in the following order: A) detecting the center of gravity of the glass substrate; and B) creating a center hole so that the center of gravity becomes the center of the center hole. Paragraph [0064].

Dependent claim 21 is the only dependent claim, and recites detecting the center of gravity by carrying out image processing on a two dimensional image as viewed from the direction of the glass substrate. Paragraph [0064].

Application No. 10/825,178

Dependent claim 21 stands or falls with independent claim 20.

**Grounds of Rejection To Be Reviewed By Appeal**

Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Philips (Derwent Abstract to NL8600728), Ikenishi et al. (U.S. Published Application No. 2003/0109370) and Suzuki (JP 2000182316).

**Argument**

Independent claim 20 recites, in part, the following **two distinct steps** in the following order:

- A) "detecting the center of gravity of the glass substrate; and"
- B) "creating a center hole so that the center of gravity becomes the center of the center hole."

As an illustrative and non-limiting example of claim 20, the specification, at page 28, paragraph [0064], recites:

[0064] In the center of gravity coring process that is carried out in the case that a glass substrate of a hard disk provided with a center hole is manufactured, the center hole is created so that the center of gravity of the glass substrate becomes the center. Described in detail, a **two dimensional image of the glass substrate as viewed from the direction of the thickness of this substrate is image processed by a non-contact optical-type form measurement device using a laser beam system so that the center of gravity is detected and the center portion in a circular form, of which the center is this center of gravity, is cut out**. The same method as the cutting method for creating a center hole in a well-known manufacturing method for a glass substrate of a hard disk can be adopted. For example, a method for precisely processing the inner periphery, a method for scribing by means of a diamond cutter, or the like, along the outline of a desired cutting region in, at least, one surface of a glass substrate and for giving an impact by an impacting body in a desired cutting region under the condition that this surface is facing upwards, a method for cutting an outline of the desired cutting region in a glass substrate by creating a cut by means of a laser beam, and the like, can be cited. According to invention A, a center of gravity coring process is carried out as described above and, therefore, surface vibration in the glass substrate provided with a center hole, of which the outer periphery portion is unprocessed, can be prevented.

Applicants emphasize that independent **claim 20 is a process type claim**, and is not a machine or article of manufacture type claim.

The Office Action dated February 20, 2008, at pages 2-5, asserts that all of the elements of claim 1 are allegedly disclosed by the combination of Philips, Ikenishi, and Suzuki. Applicants respectfully disagree.

Specifically, the Office Action, at pages 2 and 3, asserts that “[i]t would have been obvious ... to expect that the center of gravity is detected in the process of Philips in order to assess that the center of gravity is in the center of the center hole.” Applicants respectfully disagree.

Phillips, at Abstract, merely states that “[m]ass of disc is evenly distributed with centre of gravity in centre of hole.” Phillips is directed to welding two discs together, and does not teach or suggest the two distinct steps of claim 20 in the order required by claim 20:

- A) “detecting the center of gravity of the glass substrate; and”
- B) “creating a center hole so that the center of gravity becomes the center of the center hole.”

Specifically, Phillips does not teach or suggest **detecting the center of gravity before creating a center hole**, and then using the detected information to create a center hole so that the center of gravity becomes the center of the center hole. Instead, Phillips merely attempts to make a final product with the center of gravity in the center of the hole by welding two discs together, wherein **each disc already contains** a center hole, as described in the Abstract.

Applicants submit that a person of ordinary skill in the art would interpret Phillips as merely disclosing **a quality control step of inspecting the final product regarding the center of gravity and the center of the hole, and merely rejecting and discarding any final product which does not contain the center of the gravity in the center of the hole**. In other words,

Phillips appears to treat containing the center of gravity in the center of the hole as a desired quality of the final product, but does not expressly state when the center of gravity is detected.

Thus, Applicants submit that Phillips does not teach or suggest the two distinct steps of claim 20 in the order presented by claim 20. Further, Applicants repeat that claim 20 is a process type claim, and is not a machine or article of manufacture type claim.

Ikenishi, at page 3 of the Office Action, appears to be relied upon merely for a process of creating a central hole in a glass substrate. However, Ikenishi, at page 7, paragraph [0080], merely states “making of a center hole.” Also, Ikenishi, at page 17, paragraph [0125], merely states “a hole was made in the central portion [sic] of the glass substrate with a cylindrical grinder.”

Thus, Applicants submit that Ikenishi does not teach or suggest the two distinct steps of claim 20 in the order required by claim 20.

Applicants submit that Suzuki expressly teaches away from claim 20. Suzuki, at Abstract, merely states “to measure centroid eccentricity of a disk-like information recording medium with high precision and moreover to easily correct centroid eccentricity” and “[t]he position and size of a deviation of the center of gravity of the CD-ROM medium 1 is known by measuring the direction and quantity of a deviation of non-linear inclination to the linear inclination. And [sic] the CD-ROM medium 1 is rotated so as to put an arrow mark 6 together to an opposite side position of the position, and **a sticker equivalent to the weight of a deviation of the center of gravity [from the center of the center hole] is stuck there.**”

In other words, Suzuki measures centroid eccentricity after a center hole is created, and then corrects the eccentricity by placing a sticker on the disk.

In contrast to Suzuki, claim 20 requires **detecting the center of gravity before creating a center hole.** In other words, claim 20 avoids the need for Ikenishi by detecting the center of gravity before creating a center hole, and only then “creating a center hole so that the center of gravity becomes the center of the center hole.” Therefore, Ikenishi actually teaches away from detecting the center of gravity **before** creating a center hole.

Thus, Suzuki also fails to teach or suggest the two distinct steps of claim 20 in the order required by claim 20.

Thus, at a minimum, the combination of Philips, Ikenishi, and Suzuki fails to teach or suggest the two distinct steps of claim 20 in the order required by claim 20.

Thus, as independent claim 20 is allowable for the reasons set forth above, it is respectfully submitted that dependent claim 21 is allowable for at least the same reasons as independent claim 20.

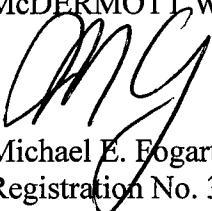
For all of the foregoing reasons, Applicants submit that the rejection does not present a *prima facie* case of obviousness over the combined teachings of Philips, Ikenishi et al. and Suzuki. Hence, it is respectfully requested that the rejection of independent claim 20 and dependent claim 21 under 37 U.S.C. § 103(a) be reconsidered and withdrawn.

**Conclusion**

For all of the foregoing reason, Appellant respectfully submits that the grounds of rejection of the claims on appeal is in error and should be reversed.

Respectfully submitted,

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**CLAIMS APPENDIX**

Claim 20. A manufacturing method for a glass substrate, comprising the steps of:  
melting a glass material;  
flowing the melted glass into a lower mold;  
press molding the glass between an upper mold and the lower mold into a glass substrate;  
detecting the center of gravity of the glass substrate; and  
creating a center hole so that the center of gravity becomes the center of the center hole.

Claim 21. A manufacturing method according to Claim 20, wherein the center of gravity is detected by carrying out image processing on a two dimensional image as viewed from the direction of the thickness of the glass substrate.

**EVIDENCE APPENDIX**

No evidence other than the prior art cited by the Examiner has been presented during the prosecution of the present application.

**RELATED PROCEEDINGS APPENDIX**

Appellant's representative is not aware of any related proceedings.